Notebook, N-05-07-08

2000) 80000 (40,

2069—

Experiments with perforated tubes + flake metal with various sticky oils + proportion + manipulations July 8 1905

No 90 =

18000 green thro 80 fines in
6000 flake NiCo 70/30 thro 20
8000 of filtered moderately thick gum Dextrin, it wasn't ropy but thin like table syrup - It acted like glucose, mix not sticky acted just as if wet with water, dries too quick & stix to fingers (ie) particles looked dry under micro particles mixed thro flake but all free except at one spot where it touched cake - think it ng except that merely mixing green ~~&~~ preventing ~~degree~~ segregating to bottom will do the big ion test - mix green + [illegible] from green that being covered all over.

over

750

23.9

379

90 Continued 50 tamps 3lb 5" Drop

Weight active material 6.755
Collapse 277
Tamps 48

3.79 grams

91 Dup of 90

Weight AM 6.685
Calliper 276
Jumps 47

Small crack in one end

3'75 gram

Note - strong gum arabic mg
use 15000 green
8000 gum arabic not strong
thick so - went immediately
[illegible] - wouldn't mix - perhaps
it ought to have been cold

What is wanted apparently
is a thick body that is
highly viscous but [illegible]
+ takes long time dry
so as give time for mixing

Stopped work Saturday
6 pm out of Cake -

92 Dup of 90

Weight active M 6.835
Calliper 277
Temps 49
3.84 green

The flake used in 93 is from new bottle
& its very bulky pbly thinner—

93—

18000 green thro 80 all fines in—
6000 Cornflake 70/30 thro 20
6000 Rosin dissolved in boiling 5%
KOH until when cold like thick
molasses — works good covers
green easily. has advantage that
dont color green — gets a little
sticky when ready. I put flake
in — apparently perfectly covered
by Eye no green on flake, yet under
microscope most of pieces can be seen
but are only partially covered
but the flake is thoroughly mixed
with them — I notice this flake
has 50% greater bulk than
previous bottle of flake used
The ~~flake~~ mix after making
feels dry but that is probably
because of the Enormous
sticking power of the Rosin
hence no Rosin transfers to
flake & its better covering
of the particles [illegible]
works good [illegible]
it would be very practical

I think that the rosin doesnt lose its moisture very fast

50 Tamps - 10 Dont dry the - mix

Weight active material 6.020
Calliper 277
Tamps 55

Mix worked allright for tube

3.61 gram
3
1083

94 Dup of 93 -
Dont dry the mix
Weight active material 6.070
Calliper 278
Tampo 56 -

small hole in one end)

3.61 gram

95 Dup of 93

Dont Dry the mix

Wright of active material 6.045

Callipers 278

Jumps 51

3.61 green

96=

18000 green
6000 NiCo flake 70/30 thru 20.
6000 Rosin soap mixture,
The mix is to be dried in the air
50 Tamps - 366 5" Drop
Weight active Material 5,430
Calliper 277
Tamps 48

3.25 green

Mix is ok but it worked it longer
shows green tint, there is considerable
tendency to balling as rosin
gets sticky rapidly after mixing
with green - It should be little
thinner I think to give time
to mix flake well before balling

it worked well for tubes green
separated but very little from
the flake

97 Dup of 96

Mix dried in air
Wt active material 5.505
Calliper 275
Jumper 50

3.30 green

98 Dup of 96

Mix dried in the air
Wt active material .5395
Calliper 277
Temp. 48

3.23 grams

99 = Dont dry.

18000 green thru 80 all fines in
6000 Com 70/30 flake thru 20
6000 - Considerably thinner Rosin
mix than 93 to 98 = it works ok ~~[illegible]~~
There is no balls - its dry when get
through mixing but no only all
the particles tend fuse in micro
with pieces of flake stuck to them
Think the thicker mix is preferable
I will now try 8000 - Rosin Thin
mix -

50 Tamps 3.16 5" drop

Weight am 6.390
Caliper 277
Tamps 51

worked good and flows well
mix was dry

3.83
3
1149

100 Dec 26 99

Dull Dry
Weight AM 6.270
Cal 278
Temp 54

376 green

101 Dup of 99

Dont Dry

Weight am | 6.190

Cal 277

Tampon 53

3.65 green

Dry in the air

102

18000
6000 NiCo 70/30 thru 20 flake
8000 Thru Room soap mix –
50 Lamps – 3lb 5" drop –
Dry in the air –

This mixes ok no balls, mix has green tint under lamp all particles separate & stick to flake but ~~[illegible]~~ particles not be covered – This would be very [illegible] mix –

Weight am 6.095
Calc 278
Tamps 46 –

green segregated to bottom

3.42 green

103 Dup of 102
Dry in air

Weight active material .6150
Cak 278
Temp 50-
Small crack on end -

3.45 green

104 Prep of 102

Drying air -

Weight a.m. 6.125
Cal 277
Temp. 48

3.45 grams

air dry

105 -

18000 green All thro 200 mesh.
6000 Coll 70/30 thro 20 (flakes).
8000 Rosin thin [illegible].
50 lumps. 3lb 5" drop -

Covers green ok - Mixes will flake without balling - Mix strong greenish tinge as under micro flake ½ coated with particles, mostly all separate. Think in drying & handling will segregate.

Weight all 5,745
Col 277
Lumps 47

r dryed worked good but green segregated very little

3.22 green

106 Dup of 105 air Dry

Weight all 5.710
Cal 277
Tumpi 48

3.22 green

107- Dup of 105 —
air dry

Weight AM 5,750
Cal 276
Tamps - 48

3.22 gram

108 - air dried

18000 green thru 80 fines in
6000 Cornflake 70/30 - thru 20
8000 of the thicker Rosin Soap
same as used in 93.

.50 Tamps 3 & 6 5" long -
Mixes OK - gets sticky strong & gets
easy to clip balls - This would
be a very practical mix -
No green tint, particles under
micro pretty well covered
& well disseminated -

Weight all 5.850
Coll 277
Tamps 52

air dryed worked good no segregation

3.28 green

109 Dup of 105

Air dry

Weight all 5.920
Cal 277
T 52

3.32 green

110 Dup of 108

Weight am	5.795	air dry
Cal	276	
Temp	49	

3.30 green

111 –

18000 green thru 80 all fines in
6000 NiCo 70/30 thru 20 flake –
6000 powder K Sulfate thru 200 –
6000 thick Brown soap flake used in 93
~~Mixed~~ Put in flake & Sulfate same time, green
sticky slight green tint
Dry – no balls to speak off –
Colouring fair –
50 lumps 3 lb 5" drop

Weight all 6.260.
Cal 277
Lumps 50

worked good and [illegible] well
mix was dry

3.13 green

112 Dup of 111

Weight am 6.155
Cal 277
Temps 47

3:10 [illegible]

113 Dup of 111

Weight adjustment 6.220
Cal 278
Jumps 48

3.10 green

114 — Air Dry it

18000 green thro 80 all fines
6000 NICKEL flake only thro 20
6000 Stiff Rosin Soap lo 6/93
Green sticky — but for some reason)
Mix very green & poorly covered)
Think Rosin is so sticky that
it breaks flake all up, under
micro nearly all the green
shows fine but flake stuck
to it fairly well disseminated
There is such a thing as having
it so sticky that it breaks
flake up in mixing.
Possibly 8000 of the thinner
Rosin would be better —
50 Camp's

Weight active material 6.075

Cal 277

Jumps 47

air dryed green segregated to bottom

3.64 green

115 Dup of 114

air dry it

Weight AM .6110

Cal 277

Tamps 46

366 grains

116 Dup of 114
Air dry it
Weight Volume in 6.105
Cal 270
Tamps — 49 —
366.grain

117 =

18000 green thru 80 all fines –
6000 flake CoNi 7/30 thru 20
6000 Molasses boiled down only a
little, not sticky – wet green ok but not
slighted sticky – Not well covered
green tungs – a little segregated
50 Tamps 3 LG 5" Drop
The glass mix + Molasses hot while mixing

Weight all 6.310
Cal 278
Tamps 52

(c damp – did not flow well

3.78 green

118 Dup of 117

Weight all 6,070
Cal 278
Jumps - 53

3.64 green

119 Dup of 117

Weight am - 6.275
Cal 278
Tampo 51

3.76 green

Can't be dried & glycerine

120 –

18000 green thru 80 all fines in
6000 Cornflake 70/30 thru 20.
about 5000 in 6000 glycerine –
Wet green perfect. no sticky
green mixes really thoroughly
think it is dry [illegible] [illegible] give
no trouble. This would seem to
mix green & hold it mixed & think

50 Jumps 3 lb 5" drop –

Weight all 6.665
C/C 277
Jumps 44

Fred says glycerine squeezed out
& it worked rotten,

121 Dup of 120

Weight active material 66.20
Cal 278
Jumps 42

122 Drop of 120

Weight all 6,495
Cal 277
Jumps 40

These tubes to soak in $1\frac{1}{2}\%$ KOH,

123

18000 green thro 40 on 200 -
6000 N.Co flake 70/30 thro 20
6000 Very stiff Molasses
it makes green fairly sticky, covers
perfect no green tinge & micro shows
scarcely a green & then its mostly
covered — Noticed that the N.Co flake
is rather dark although its been
thro Hydrogen — possibly its thinner
than what have been doing.
These proportions of Mol is ok to
work — on putting flake in there is
no balls formed at all — the mix appears
to be bone dry & is ok in every way
Could not use much less Molasses,
but if green was thro 30 on 200 think
5000 Mol would be OK — the above
is not too sticky but just right to
stop balls — I cooked our reg mol
till ropy & considerable air plays
Ord temp 90 Fahr when
mixing 50 tamps 3 lb 5" in drop
Wt active mat. 6.260
Col 278
Tamps 51 3175 green
Tested good flared well
Small crack in one end

124 - Dup of 123

Weight am · 6,185
Col 27.7
Tampo 49

3·71 grain

125 - Dup of 123

Weight AM 6.260
Cal 278
Jumps -51

3.75 green

Temp 90 Fahr

126 - green - thru 40 on 200 -

18000 NICKEL Flake. Warren -

6000

Good Very stiff [illegible]

Sticky OR=. Tinge of Green but Covers fairly well think Ni flake is thicker than CoNi 70/30 which is reason don't appear Coarse so well Tumbling - 50 lumps 366 5" drop -

Weight am 6.390

Cal 277

Temp 48

3.83 green

127 Cap of 126

Weight all 6.420
Cap 277
Stamps 51

3.85 green

128 Dup. of 126

Cot am 6.440
Cal 278
Tampa 49

3.85 green

Temp 90 Fahr flake seems to be bulky & black

129

18000 green thru 30 on 200
6000 Colloflake 70/30 thru 20 -
5000 Very stiff Molasses

Very sticky, Coarse part at nothings
no balls - Dry mix after mixing
worked well in machine until end drying.
3 lb 5" chop - 50 Tamper -

Weight am 6,220
Calc 278
Tamper 52

flake press

3,85 green

130 [illegible] 129

Weight 5,980
Gal 278
Temp 51

3.70, green

131 Dup of 129

Weight a.m. 6.050
C of C 278
Tamga 49

3.72 grams

Temp 90 Fah

132 =

18000 - green thro 30 on 200 —
6000 - black held by [illegible] flake
4000 Very [illegible] —

fairly sticky green - Covers well but not quite so well as 5000 Mix, can scarcely see by eye a particle green its dry & will flow well in the machine without drying -

50 Tamps 3 lb 5" drop

Weight am 5,795
Cal 278
Temp 48

Small crack in both ends

3.72 green

133 Dup of 132

Weight am 5,790
Cal 277
Temp 80
Small crack on one end

3,72 green

134 Dup of 132

Weight aluminium 5.855
Cal 2.77
Tungsten 51

3.76 grams

135 6000 NiCo 70/30 thru 20 —
15000 thru 40 on 200
5000 - glucose not being boiled, seems
little stiffer than the stiff Mix the too
stiff – Very sticky green & OK
but balls too much with flake
wouldn't be permissible —
Covers OK - no ~~tint~~ or green
seen by eye – flake broken
up fine – would have to be
fair dried – Think the Reg
glucose be OK without boiling
50 Tamps 3 lbs 5" drop

Weight all 5860
Cof 277
T 48
Small crack in [illegible] end

3.69 gram

136 - Dup of 135

Weight ann 6,000
Cal [illegible]
T 41

3.78 grams

137 Dup of 135

Weight all 5.935
Coal 2.77
T .48

3.76 grams

138 —
Tubes packed with
Req non [illegible] 316 5" Drop

Weight gm 9.070
Cal 271
Tamp 51

139 = Dup of 138

Weight 9.140
Cal 279
T 52

90 Fahr

140

18000 green thru 40 on 200
6000 MCo 70/30 black backing thru 20
5000 Glucose out big bottle -
This is thinner & makes green very
sticky 9 OK-9 Balls cup considerably
but balls easily broken. Coarse
ok - flake getting fine from working
[illegible] - screened out balls in 20 mesh
& worked them up - it wants to
be a shade thinner so
Balls formed are broken without
any appreciable pressure in
twisting. Should stay 1/10th of
water added in mold at
50 Temps - 3.66 5" Drop

Lot AM 6.010

Cal 277

Temps 52

3.78 grains

141 Dup of 140

Wright all 6.040
Cal 276
T 53

3,78 grsaw

142 Dup of 140

Wt a M 5,590
Col 277
Tunups 51
Small crack in one end

3·71 gram

90 Tube

143 =

18000 green thru 40 on 200
6000 NiCo 70/30 thru 20 black
5000 Glucose much thinner
than Regular by bottle, it was
thinned down but by 1/6th of
water.

its little too thin, although green is a
little sticky no balls - is rather
dry + powdery. Can see some
green but quite faint —
Something between this + the
stuff we kept bottle would be
ok. its a fine point of green is
to be got sticky + green all covered
flake breaks up rather fine also
possibly due to flake being more smaller
than original flaking or not
brought up in hydrogen high
enough
50 lumps - 3 lbs 5" drop

Weight 5,980
Cal 277
Tare 51 3.76 green

144 Dup of 143

Weight	6,030
Cal	278
T	51

3.78 gram

145 Dup of 143

Weight	6.075
Cal	277
Jump	50

3.78 grams

391
26
6
234
7826
6
1016

36
5
26
1
276
3
9

146 - 5000 molasses stiff -
18000 green thro 40 on 200
3000 Cornflake 70/30 thro 20 black
mixed this first with green which was not very sticky as I should have used 6000 Molasses ~~[illegible]~~ stiff instead of 5000 - 5000 when [illegible] is sticky with thro 30 on 200 but is not sticky enough with thro 40 on 200, After mixing the 3000 Cornflake which covered fairly well no green showing roughly looking at it I mixed 3000 flake NICKEL thro 20 with the covered mix only mixed it didnt work it with fingers —
50 samples 3 ft 5" drop

Weight	6.210
Cal	277
T	50

3.91 green

147 Dup of 146 -

Weight -	6.160
Cal	277
T	50

Small crack in one end.

319 green

148 Dup of 146

Weight	6.210
Cal	277
T	51

3.91 grams

149=

15000 thro 20 on 200 -
but there was very little fines in it
for some reason
5000 Stiff Molasses awful
sticky fairly wet,
6000 M Co -
Mixed perfect no balls worked
fine - This is pbly due to
having so great an excess that
it couldn't get adhesion like it
would if thin - no balls -
This would work fine if could
get it this way - its dry
after covering - need not
be dried - Covered perfect.
4000 would do probably
just as well -
Will try 4000 - Stiff Mol.
50 tamps, 3 lb. 5" Drop
Weight 6.220
Cal 278
T 51 3.91 gram
air dryed.

150 Dup of 149

WEight	6.165
Cal	280
T	50

3190 grain

151 - Dup of 149

Weight	6.185
Cal	280
T	50

3.19 green

28000 | 60000 (21.2
56000
40000
28000
120000
112000
8000

28000 | 180000 (64.2
168000
120000
112000
8000

28000 | 40000 (14.2
28000
120000
112000

152 =

18000 green Lino 30 on 200
4000 Stiff molasses
6000 NCO 70/30 lino 15 mesh
Not quite enough mol to make it proper sticky. wants 5000 for this size - Covered perfect no tint, Dry ok-
50 Temp in 3.6 5" Drop

Weight 5,770
Cal 277
J 51
worked good.

3.70 green

21.2 flake
64.2 green
14.2 Molasses
99.6

153. Dup of 152

Weight	5.810
Cal	276
T	52

3.72 grams

154 Dup of 152

Wright	5.825
Cal	278
Tanya	51

3.72 grams

29000/18000.00 (62.

29000/[illegible] (17.1

29000/6000.00 (20.6

155 —

18000 green thru 30 on 200
5000 stiff molasses
6000 NiCo 70/30 thru TEN MESH.

green good sticky [illegible] about right.
Big flake more bulky no balling
perfect in that [illegible] perfectly
Covered - lots big flake, [illegible]
as didn't have to [illegible] any
Man could Easily hand mix
for 100 [illegible] this way
it works quick — [illegible]
50 Turkeys 3 lbs 5" drop
it is dry but don't know if
big flake will [illegible]
[illegible] in falling —

Weight 6.180
Cal 278
T 50

Large flake does not let mix flow well. 3.89.

156 Dup of 155

Wright	6,090
Cal	278
J	51

3,183 green

157 Dup of 155 —

Weight	6.050
Col	278
T –	50

3.83 green

18000
4000 mol
6000
28000

28000 (180000 (64.3
168000
120000
112000
80000

28000 (40000 (143
28000
120000
112000
80000

28000 (60000 (21.4
56000
40000
28000
120000

28000 (400000 (14.3
[illegible]

24000 (60000 (7.5
48000
[illegible]

158 –

18000 – green thro 30 on 200 –
4000 Molasses stiff –
6000 NiCo 70/30 thro Ten mesh –
½ put in mix worked, the other ½ of the flake put in after 1st half has been worked to cover – the last ½ only mixed –

50 lamps 326 5" Drop

Weight 5.650
Cal 278
Lamps 48
Large bridges, and don't let mix flow.

3.63 gram

159 Dup of 158

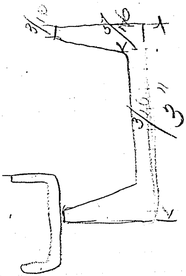
Weight	5.815
Cal	278
Jump	49

3.73 gram

160 Dup of 158

Wright all -	5,900
Cal	277
Jamps -	50

3.79 gram



17)210(12
173
40

Series to determine amount of flake

161 -

18000 green thru 30 on 200.
3000 MCo 70/30 thru 10 mesh
5000 Stiff molasses

Covers perfect no green tinge -
Dryish - green has just right sticky
& don't ball in heart yet all green sticky
Very little working without hardly
any pressure breaks the big bales
up when flake is put in -
~~4~~ - 50 Comp. 3 & 6 5" Drop

Weight 5,730
Cal 278
T 50

3.96 gram

162 Dup of 161

Weight 5,790
Cal 278
T 53

3.96 gram

163 Dup of 161 -

Wright am -	5.690
Col	278
7	50

3.96 green

164 – Same exactly as 161
Except
18000 green
4000 Ni Co flake

Perfect covered dry –

Weight 5,750
Cal 277
J 48

3.62 green

165 Dup of 164

Weight 5.810

Cal 278

J 49

3.92 gram

166 Dup of 164

Weight 5.755
Cal 375
T 48

3.82 gram

167 – Same as 161 –
Except
5000 NiCd flake

Covers perfect – dry

Weight 5,530
Cal 278
T 49

- 3.74 grams

168 Dup of 167

Weight 5,980
Cal 278
T 50

3,83 gram

169 Dup of 167

Weight 5.835
Cal 3.78
T 48

3.74 green

170 - Same as 161 - Except
7000 flake NiCo

Weight [illegible]
Cal [illegible]
T 57

3161 green

171 Dup of 170

Weight 6.040
Cal 277
J 57

3.61 gram

172 Dup of 170

Weight 6.005
Cal .22
T 52
Small crack [illegible]

3,61 gram

26000 | 180000 | 69.2
156000
24000
23400
6

173 – Same as 161
But 6000 NiCo 70/30 flake
thro 20 mesh mixed with green
first then 2000 Nickel.
flake thro 20 mixed afterwards
without working making
a total flake of 8000 –
or 69.2% of green –

Weight 6.045

Cal 278

Tamps 52

3153 gram

174 Dup of 173

Wright
Cal

J 50

3.53 gram

175 Dup of 173

Weight 6.110
Cal 277
T 50

3.154 gram

176 — Ni flake thru 15 mesh ·

18000 thru 30 on 200

3000 Warren very fluffy thin Nickel flake - large bulk - 3 grams filled 3 oz bottle

5000 glucose from big bottle with very little water to thin it say 3 to 5% —

Very sticky - probably too sticky think it made fine balls - small bulk of total wt

~~5 tamp~~ 3.66 5" drop

apparently cohesive perfect

Weight 5.830

Cal 278

7 50

4.03 green
3
1209

177 Dup. of 176

Weight 5.650
Cal 277
T 54

3.90 green

178 Dup of 176

Weight 5.595
Cal 278
7 48

3.86 grams

179 = Same as 176
but 4000 flake nickel.

Works little dryer don't think
there are so many fine balls -
3.66 5" Drop
Covers perfect
Weight 5.765

Cal 278

T 53

3.80 green

180 Dup of 179

Weight 5.660
Cal 277
Tamps 50
Small crack in one end

3.76 grain

1.81 Dup of 179

Weight 5.680
Cal 278
T 49

3.76 green

93 Fahr -

182 - Same as 176

Except 5000 grams Nickel.

Little balls

Weight 5.680

Cal 278

T 48

3.64 grsm

183 Dup of 182

Weight 5.600

Cal 278

T 49

3.64 green

184 Dup of 182

Weight 5.630
Cal 277
T 48
3.64 green

185 - ~~[illegible]~~ Same as 176
Except 6000 Nickel flake

Wt 5,700
Col 278
T 49

3.53 green

186 Dup of 185

W 5,850
Cal 278
7 49

3.62 grsen

187 Dup of 185

Wt 5.805
Cal 277
T 5.0
Small crack in one end

3.62 green

18000
7000
25000

25000) 70000 (.28
50000
200000
200000

188 Same as 176 —
Except - 7000 Ni-flake

Wt 5.940
Cal 277
Tamp 48

28% Ni flake

Small crack in one end.

3.56 grsen

189 Dup of 188

Weight 5.780
Cal 777
T 48

3.46 green

190 Dup of 188

Wt 5835
Cal 2.78
T. 50
Small crack in one end

3.50 green

92 Fahr

191 –

18000.
6000 Very bulky thin Nickel flake
thro 15 mesh
5000 stiff molasses –
Not sticky – ⑩ only a very little,
not near like the glucose fuel used)
big bulky mix no balls perfect
Coloring +

Weight 5.890
Cal 278
T 49

did not flow well

3.65 green

192 Day of 191

Weight 5.815
Cal 278
T 50

3.65 green

193 - Aug - 6'91

Wt 5.855

Cal 278

T 57.

3.65 green

5760 against 7650, iron with
Mercury in—

194=
25 Black non Reg Italian
Ralph sent it up — No mending in it
8000 quite thin [illegible]
not [illegible] [illegible] it
so you could [illegible] of [illegible]
used 4000 of the very thin Nickel
flake [illegible] —
Its fairly warm [illegible] metal
[illegible] but of course
didn't cover
3 lb 5" diag— [illegible]
drying [illegible]
Weight 8,535
Cal 276
T 51
5.76 Iron

195 Duplicate of 194
Weight 8.555
Cal 278 5.76 iron
Temp 50
did not flow good

19[illegible] [illegible]
[illegible]
[illegible] 1974 [illegible] using [illegible]
blocks
[illegible]
[illegible]
[illegible]
4[illegible]
[illegible]

[illegible] 8.255

[illegible] 276

[illegible] 52 5.29 [illegible]

197[illegible] [illegible]

[illegible] 8.460

[illegible] 277 5.42 [illegible]

[illegible] 51

did not flow good

24000) 60000 (25
48000
12000

19.8

18000 green thro 30 on 200
6000 dark Cobalt Nickel 70/30 flake 15 [illegible]
5000 Stiff Macaroni

To be given 100 Tamps 3 lb 5" drop.

Wt 6,100
Cal 278
T 101

20% flake

[illegible]

3.78 green

199 Dup of 197

W 5.960
Cal 278
T 99

3.69 grain

200 Dup of 197

Wt 5.970
Cal 277
T 100

3169 grain

201 —

18000 thru 30 on 200
6000 Nickel flake fluffy thin leafy
5000 - glucose

sticky & ok - no balls —
Works fine — no drying necessary
This Ni flake breaks up more than that
previously used - as Warren putting
20 to 40 layers on + more Zinc —

100 Tamps. 3lb 5" drop

Weight 5.445

Cal 277

T 101

3.36 green

202 Dup of 201.

Wt 5.310
Cal 278

7 102
Small crack in one end

3.29 green

203 Dup of 201

Wt 5.400
Cal 277
J — 101

3.29 grams

18000 Thro 30 on 200
6000 Nickel flake thin & bulky
friable — prbly been eaten (too much by acid)
5000 Glucose —
Green sticky — mixed thru different
put in about 1/5 of flake &
thoroughly mixed it — no balls
flake broke up very much,
in micro see green many particles
covered with fine broken flake
1/5 to 1/4 size of particle or)
particles on partly covered —
no balls — then put in the
other 4/5 of flake - covered
dry no balls created
50 Tamps 3 lb 5" Drop

Wt 5.720

Cal 277

T 56

3.154 green

205 Dup of 204

Wt 5,550

Cal 278

T 56

3.44 gram

206 Dup of 204

Wt 5.380
Cal 277
T 54

3.32 grain

207 =

18000 gram thru 30 on 200
6000 Ni Co flake 70/30 15 mesh dark fine
6000 Conc KOH.
Wet it good not sticky — no [illegible] —
pbly have to be dried — Covers perfect.
flake very bulky —
50 tamps 3.C6 5" deep
Wt 7,340

Cal 279

T 51.
when put out to dry it got wet instead
of drying packed firmly

208 Dup of 207

Wt 7,210
Cal 278
T 48.

209 · Dup of 207

Wt 7.010
Cal 279
T 51

29000) 1800000 (62.6
1740
600
580
200

29000) 600000 (20.6
580
200

29000) 500000 (17.2
290
210
203
7

80 [illegible]

210

18000 thru 30 on 200
6000 NiCo 70/30 flake very fluffy thin dark [illegible]
5000, Glucose [illegible] [illegible] [illegible] /
big batch -
Green sticky - no balls, powdery Dry OK
[illegible] making in machine - Crown perfect
To have 50 Double tamps /
3 lbs 5" Drop

Weight 6.470
Cal 278
T 57 · 4.01 green

green 62.6
20.6 flake
17.2 glucose
100.4

6470
3780
5176
5290
4.5 4100
6470
2445
4023

211 Dup. 6210
50 Double Jamps

Wt 6.315
Col 277

T 52
Small crack one end

3.91 grams

212 Dup of 210 —

Wt 6.330
Cal 278
T 54
3.91 gram

213

18000 Karo 30 on 200
6000 NiCo 70/30 bucky dark, freckle
5000 glucose same as 210,

To 62 run in 33% KOH,
/ 50 Jumps — 3 lb 5" drop

Wt 5,985

Col 278

T 52

3.71 green

214 Dup of 213

Wt 5.880
Cal 278
T 49

3.64 gram

215 Dup of 213

Wt 5.825

Cal 278

T 50

3.64 grams

216=

18000 thru 30 as 200
6000 NICKEL Flake bulky, friable, thin
5000 glucose same as 210-
50 Tamps 3 1/2 lb weight. 5" Drop

Wt 6,170

Cal 278

T 53

3.85 gram

217 Dup. of 216

Wt 6.000
Cal 278
T 51

3.72 grain

218 Dup of 216

Wt 5.825

Cal 277

Jamps 49

Small crack one end

3.61 gram

219

18000 Thru 30 on 200

6000 bulky friable nickel flake

5000 glucose same as 210.

green I think is too sticky - it balls
some if less sticky be ok & couldnt
balling hence friable flake couldnt
break up so much —

50 Tamps 4 lbs weight

Wt 6.170

Cal 277

T 49

3.82 green

220 Dup of 219

Wt 6,230
Cal 277
J 51

3.86 g/[illegible]

221 Dup of 219

Wt 6.000
Cal 275
T 44
Small crack one end

3.72 green

2222 Reg flat cups
200 alma flakes
18000 Iron without Mercury
6000 Corn flake
Sufficient glue water to stick it,
Dry it then weight out 4 or 5 grms

223 Dup of 222

224 Dup of 222

22,5

18000 Green
6000 Corn flake – new flake fairly bulky –
about 20% H_2O [illegible] good
5000 glucose [illegible]
Dry this mix on asbestos on hot plate
for 1/2 hour before use
50 lamps 3 lb 5" Drop

Wt 5,125

Cal .279

T 56

226 Dup of 225

LOf	5.070
Col	.281
T	53

227 Dup of 225

Wt	5.130
Cal	279
T.	51

228

18000 thru 30 on 200,
6000 Bucky NiCo flake
5000 glucose .

Green not extra sticky but just right.
This mix I worked the flake longer so
each particle showed as separate it
got dryer & dryer as I mixed more
got less bulk than 225 — flowed more
like a dry powder —
50 Tamps 3lb 5" Drop

Wt 5.570

Cal .277

T 49

Small crack on one end

229 – Dup of 228

Wt	5.505
Cal	.276
T	.53

Small crack on one end

230 Dup of 228

Wt	5.325
Col	.277
T	50

Small crack on one end

231

18000 [illegible] 30 on 2000
6000 Colli flake - bulky black
5000 Glucose -
50 tamps. 3" lb 5" drop - no balls -
dry & powdery -
Rinse in 10% KOH,
+ 10% Carbonate Potash.

Wt 5.710
Col .277
T 54

232 Dup of 231

Wt = 5.480
Cal .277
T 52

Small crack on one end,

233 Dup of 231

Wt	5.485
Cal	.276
T	53

234.

18000 green thru 30 on 200
6000 NiCo flake – bulky black –
5000 [illegible]
Moderately sticky –
50 T 366 drop 5" mold

This cell to be in Nickel Cell & run COLD, not to go on hot test at all –
Run 150 runs Cold then put on hot Dec 8th 1905 had 100 hot runs –

Wt 5,765
Cal 277
T. 54

235 Dup of 234

Wt 5.525
Col .276
T .51

236 Dup of 234

Wt	5.530
Cal	.276
T	51

237

18000 green thro 30 on 200
6000 Cobalt nickel flake 70/30 [illegible]
5000 glucose - Covers perfectly
[illegible]
366 5" Drop 50 Tamps —

Run Reg in little metallic Cell
Then Holland is to take it for
testing Economy, capacity, etc
it is not complete & cell
represent more nearly what we
will make in practice.

Wt 5.565
Col .277
T 53

238 Dup of 237

Lot	5.257
Col	.277
T	52

crack on one end

239 Dup of 237

Wt	5.270
Cal	,277
T	51

Courtesy of proprietor of CoTo Mi flake co OK = Warren made it 5 days for one oz =

240

18000 green thro 30 on 200

6000 CoMi flake - very friable, + poor, so much fines had to screen out dust thro 80 mesh, so its thro 15 on 80 - under micro its dull - dirty - with very fine black specks, looks like (1s) the flake like lead + very much curled, it powders extremely Easy with the fingers + I dont think it will give good results probably breaking up in loading

5000 Glucose little thinner than in long bottle - Covers perfect: dry + ok to work

100 Tamps 3 lb 5" Drop

Except had trouble with balls as I dare not work hard on account brittle flake - green sticky -

Weight 6.088

Cal 278

T 95 3.77 green

241 Dup of 240

Weight 6.032
Cal 277
Tampa 105
Small crack one end

3.77 green

242 Dup of 240

Weight 5.983
Cal 278
Tamps 105

377 grain

243.

18000 green thru 30 on 200.
6000 NiCo flake same as used in 240
5000 Glucose "

green sticky ok -
Works like 240 — Covers perfect

50 Double Jumps - 3lb 5" Drop

Weight 6.303
Cal 277
T 54 3.90 green

244 Dup of 243

Wt 6.115
CaC 278
T 51 3.79 green

245 Dup of 243

Wt 6.053

Cal 279

T 51 3.77 green

* Notice with this flake the bulk of the flake which generally fills the bottle nearly full is only 1/2 full

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246 –

18000 green
* 6000 NiCo flake like used in 240
5000 glucose "

Covers perfect – ok –

100 Jumps 4 pound weight 5" drop

Wt 6.568

Cal 278

T 94 4.07 green

247 Dup of 246

Wt 6.210

Cal 277

T 96 3.85 green

248 Dup of 246.

Wt 6.191
Cal 277
T 97 3.85 grams

249
18000 - green thru 30 on 200
6000 NiCo flake like 240
6000 33% KOH. mixes ok -
covers apparently perfect, green not
sticky - mix little draggy may not
flow well in a roller feed -
100 Tamps 3 lb wt, 5" drop
Could prbly use 5000 33% instead 6000.

Wt 7.483

Cal 277

T 98 4.48 green

250 Dup of 249

Wt 7.515
Cal 277
T 99 4.500 green

251 Dup of 249

Wt 7.568

Cal 277.

T 98 4.54 gram

Think flake is too brittle + thin

Warren says its 2 or 3 times thinner than he made -

252 -

18000 thru 30 on 200

6000 - blackish Corn 60/40s barley -

5000 glucose -

Green not sticky - dont cover well. lot free particles - of this kind of glucose 5000 is not enough to prevent segregation will use 6000 on the next one

50 Double Tamps -

Weight 7,130

Cal 279

T 60

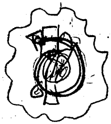
253-Dup of 252

Wt 6.765
Cal 280
T 53

254 Dup of 252

Wt 6.740
Cal 278

T 54
Small crack one end



Think flake too brittle + thin or

flake too thin brittle

255 -

18000 lino 30 on 200

6000 black bulky 60%/40 M Co/[illegible]

5000 glucose — made stiffer but didnt get stiff enough it wasnt very sticky + Lot of green particles could be seen in mix - I shared saying it was not well covered

50 Double Tamps -

Lot 6.945

Cal 278

T 54

256 Day of 256

Wt 6,985

Cal 278

T 52

257 Dup of 255

Wt 6.800
Cal 278
J 50
Small cracking seen

Think flake too brittle + thin —
flake too thin

258—

18000 green thru 30' on 200
6000 - bulky 60/40 Corn - dark -
5000 Glucose - thicker than 255 -
50 Double Tamps - 316 5" Drop —.

Wof 7,250

Cal 278

T 56

Small crack on end

259 Dup of 258

Wt 7.185
Cal 279
T. 55

260 Dup of 258

Wt 7,080
Cal 279
T 52

The flake is the very thin fragile NiCo
60+40

261 -

18000. all through 50 mesh fines in -
6000 CONi 60^{Co}+40 thru 15 mesh -
6000 glucose pretty stiff -

50 Double tamps - Freddy is to see that the lap in the tubes are bulled up - That the ends are closed tight on the mix and that the jar do not segregate the free flake from the mix -

I squeezed the mix some to make the flake adhere there are a considerable number of free grain as the 6000 glucose do not make that grade of fine grain sticky enough - The flake is quite brittle & goes to fine -

Wt 6.875
Cal 177
T 56

small crack on s [illegible]

262 Dup of 261.

Wf 6800
Cal 277
J 53

263 Dup of 261

Wt 6.740

Cal 275

T 50

264 –

18000 all thru 80 fines + all
6000 of same Co 1½ 60 + 40 flake as in 261
7000 Same glucose as in 261

50 Double Lamps with same precautions as to, tube lap – hard ends + jarring of mix

I squeezed mix some – its better covered than 261
Can scarcely see any green – with thin
bulky ~~[illegible]~~ flake + green wants more glucose –
What is really needed is tough larger +
less bulky flake

Wt 6.810

Cal 277

T 51

Small Crack in one end

265 Dup of 264

Lot 6,947

Cal 298

T 52

Big crack one end

266 Dup of 264

Lot 6,900

Cal 277

T 50

Small crack in Both sides

267

18000 green thru 100 + all fines
6000 Same flake as 261 -
8000 glucose same as 261

.50 Double Tamps with same procedure as to jarring mix - Ends tight on mix & Lap weld on Tube tight at edges.

I punched & worked mix same as 621 etc flake breaks up bad - no green particles seen

Wt. 7.170
Col 277
T. 51

Small crack in one end

268 Dup of 267

Wt 7.160

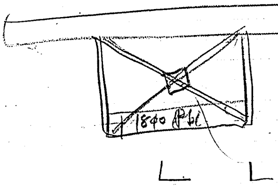
Col 277

T 52

Small crack one end

269. Dup of 267

Wt 7,050
Cal 277
T 51



5%

.125
7
.875

100 ton 500 lbs - 250
7
1750

100) 300 000 (3000
300

4) 3000
750
2000
1500

14
20
28
35
315 (350 (11
315
35

.250

12

3|800
1266
1066
192
2132
9594
1066
20467

250
7
1,750
35000
14 35 lbs

3 grms
1 mily 2 lbs
14
7 ton

22400
4500
1120000
896000
1008

35
20
35
1½
3
20
500 lbs
100 ton